Similar effects of bottom trawling and natural disturbance on composition and function of benthic communities across habitats

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Supplementary Material

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Appendix 1: Dominant genera

In most of the areas, there are a few dominant genera that represent 28-74% of the total sampling biomass; these are heart urchins from the genera, *Echinocardium* (four areas) and *Brissopsis* (two areas), a razor clam, *Ensis*, (one area) and a brittle star, *Amphiura* (one area) (see Table 3). Including these dominant taxa in the trait-based analysis reveals two different clusters, instead of 5, grouped at a p-value <0.01 (Figure S1). The first cluster incorporates all area × trawl disturbance treatment combinations that contain at least one of these dominant genera, while the other cluster contains all area × trawl disturbance treatment combinations lacking such species. The results hence clearly show that these dominant genera overshadow the community response to trawl disturbance that is the focus of this study. As such, we decided to assess the responses of these taxa to trawling separately.

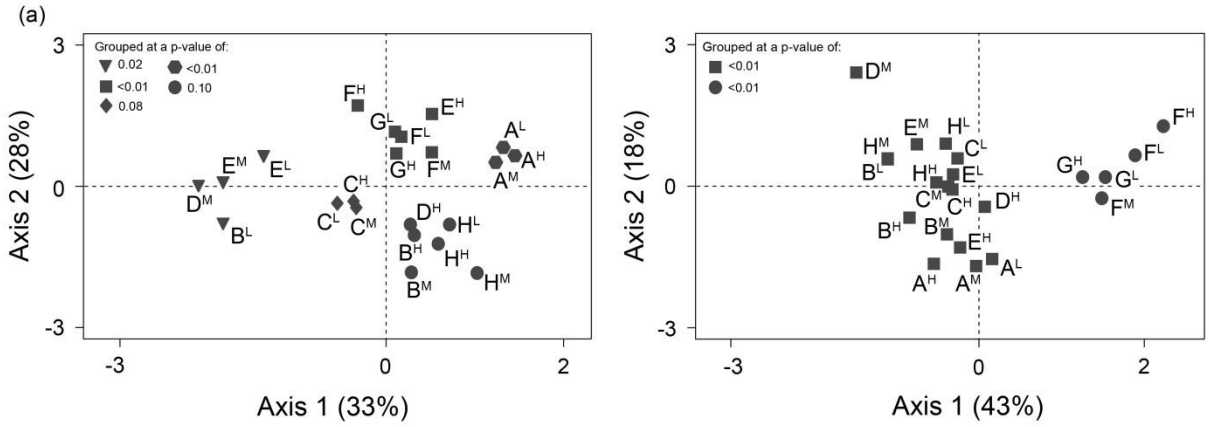

Figure S1. Outcome of the correspondence analysis based on trait composition for the different sampling areas without (a) and with (b) the inclusion of the dominant genera. The different sampling areas are split into a 'low' (^{L}), 'intermediate' (^{M}) and 'high' (^{H}) trawl disturbance treatment. The correspondence analysis shows five different clusters in (a) and 2 in (b) (represented by different symbols).

Appendix 2: Trait modalities that correlated positively with trawl disturbance

Table S1. The three trait modalities that were positively correlated with trawl disturbance in area E, as identified using redundancy analysis. The positive correlations were not significant when tested with a linear regression model.

Trait modality	Intercept	Slope	R^2	P-value
Size <21 mm	1.64	0.93	0.03	0.41
Lecithotrophic / direct larval dev.	1.53	1.51	0.02	0.35
Bioturbation activity 'others'	3.61	0.77	0.16	0.60